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ABSTRACT

This is the first of a series of National Commission for Cooperative Education (NCCE) publications for college and business leaders that will address issues related to postsecondary cooperative education (CE) and workforce development through the integration of work and learning. This document highlights the various strategies used to relate co-op work experience to students' academic programs by profiling the 25 colleges and universities that are the initial members of the NCCE Corporate Partner Program. Each profile includes a brief statement from the institution's president; describes the orientation procedures for students entering the co-op program; notes how the institution recognizes participation in the co-op; describes integrated learning mechanisms used; and explains new or special procedures related to the operation of the co-op program, Each profile also includes basic data on the program such as contact information, total institutional enrollment, length of term for CE experience, year CE program was established, description of program structure, CE enrollment, program fees, minimum and maximum number of CE terms possible, student selection criteria, number of CE employers, and earliest term students may participate in the program. A glossary of program characteristics is included. (MAB)

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ED 421 907

NCCE Executive Summary Series

Publications addressing curricular and workforce issues for college and business leaders

Number I May 1998

Cooperative Education: Institutional Profiles of Integrated Learning

Alcorn State University
California Polytechnic State University
California State Polytechnic University
Central Connecticut State University
Central Piedmont Community College
Cincinnati State Technical & Community College
Clarkson University
Drexel University
El Paso Community College
Georgia Institute of Technology
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Lane Community College
Long Island University
Macomb Community College
North Carolina State University
Northeastern University
Pace University
Pennsylvania State University
Rochester Institute of Technology
The University of Montana
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Introduction

What is Cooperative Education

College cooperative education (or "co-op") was established in 1906 as an academic strategy that integrates classroom studies with a series of paid, productive work experiences in a field related to a student's career or education goals. Since its inception at the College of Engineering at the University of Cincinnati, cooperative education has expanded to nearly 900 colleges and universities, and is offered in a wide variety of disciplines. Co-op is found at community and technical colleges, liberal arts colleges, research universities and graduate programs. Each year, nearly 200,000 students participate in co-op, enhancing their academic curricula by working for one of the approximately 50,000 co-op employers throughout the country or abroad. These employers include multi-national corporations, small entrepreneurial businesses, government agencies, and nonprofit organizations. Nearly 85 percent of the top 100 of the Fortune 500 List employ students through college co-op programs. With the growth of education reform and initiatives to increase the integration of work and learning for all students--both secondary and postsecondary, college co-op will be an important partner in building a comprehensive system of education and training that promotes student success in education, in careers, and in lifelong learning.

Focus of this Survey

Institutional Profiles of Integrated Learning highlights the strategies used by colleges and universities to relate the co-op work experience to the student's academic program. This study arose from discussions among college presidents about the means by which institutions optimize the integration of the co-op work experience with the classroom curriculum.

While this publication does not provide an assessment of the learning strategies included, the profiles can be a starting point for benchmarking, exploring new methods to link work experience to a student's academic program, or indicating areas for research. There are a number of commonly-used structures such as orientation sessions, learning agreements and evaluation forms. Beyond those, learning strategies vary among institutions and sometimes among departments within an individual college or university. There are also variations in the required or optional nature of the learning strategies. A number of the colleges profiled have an organized, structured set of criteria and mechanisms to assist students in the learning process. Some institutions are also exploring new ways to enhance the assessment of the outcomes for students. Several mention the impact of ABET 2000 (from the Accrediting Board for Engineering and Technology) and its emphasis on long-range outcomes. An expanded exploration of assessment means and effectiveness would assist co-op and other work-based learning programs in building strong, academically integrated curricula.

Preface

Cooperative Education: Institutional Profiles of Integrated Learning is the first issue of the ***NCCE Executive Summary Series*** – National Commission for Cooperative Education (NCCE) publications addressing curricular and workforce development issues for college and business leaders. The series will provide concise overviews of topics related to postsecondary cooperative education and its connections to other strategies that enhance education and workforce development through the integration of work and learning. This first issue of institutional profiles is printed for the *Executive Forum for Higher Education and Business Leaders: Partners in Integrating Learning and Work for 21st Century Graduates*, held in May, 1998 in Washington, DC. Jointly sponsored by the National Commission for Cooperative Education, the National School-to-Work Opportunities Office, and the U.S. Departments of Education and Labor, the forum is one of NCCE's on-going activities to build constructive dialogue and action among business, education and government leaders.

The National Commission for Cooperative Education is dedicated to advancing cooperative education throughout the United States. Since 1962, NCCE and its college and business members have supported the development of quality work-integrated learning programs through national advocacy, executive outreach, public awareness, the Student and Parent Response Center, research and education. The NCCE Board of Trustees is composed of college presidents, industry executives and representatives from labor, government, and national organizations.

The twenty-five colleges and universities included in this profile are the initial members of the NCCE College Partner Program. This program, along with the NCCE Corporate Partner Program, provides a forum to link the presidents of colleges offering cooperative education with industry executives and national organizations. We invite you to review the institutional profiles and to engage in collaborative partnerships to maximize the benefits to students, educational institutions and employers. Since 1906, college cooperative education has been an effective educational strategy integrating rigorous academics with paid, progressive work experiences related to a student's academic and career goals. We look forward to the expansion of this strategy within higher education, and to the enhancement of linkages among all levels of education.

We would like to thank the College Partner presidents and cooperative education practitioners who assisted in the development of this publication. Additionally, we welcome your recommendations for other topics for survey or analysis in the ***NCCE Executive Summary Series***.

Polly Hutcheson
Vice President, NCCE
Editor, *Institutional Profiles*

Paul J. Stonely
President, NCCE

Institutional Profiles

In keeping with the executive audience, each entry includes a statement from the president, addressing the particular opportunities and challenges facing cooperative education, either on his or her campus or in the broader environment. College entries are concise and offer an overview of orientation and integration strategies. To assist in comparison of institutions and of operating characteristics, you will find a brief profile of the co-op program characteristics. There is also contact information should you wish to explore that college's program further. ***Please consult the glossary in this publication for an explanation of terms included in the co-op program information section.***

Institutional Profile Terms

Program Orientation for Co-op: The orientation procedures for students coming into the co-op program. In most cases, there is an indication as to which procedures are required, as opposed to recommended or optional.

Institutional Recognition of Co-op: The ways by which the institution recognizes participation in co-op. The varied forms of recognition include: academic credit that counts towards the required number of credits for a degree; academic credit that does not count towards the degree; mandatory or required participation that is considered a part of the degree requirements without separate academic credit; and transcript notations that ensure that the participation is a part of the student's permanent record, regardless of whether or not credit is awarded. *Historically, the institutionalization of co-op work experience into the curricula has proven more important as a measure of linkage, whether or not academic credit is awarded.*

Integrated Learning Mechanisms: Measures to enhance the student's integration of the co-op work experience into classroom studies. These may include learning agreements, course requirements, assessment mechanisms, the interaction of teaching faculty with the co-op program, and the less formal connections among students, teaching faculty and co-op coordinators.

New/Special Administrative Practices and Special High School/Employer Outreach: New or special procedures related to the operation of co-op programs. Since all of these colleges offer many common procedures, co-op directors were asked to list only those that are new or represent additional linkages to high schools and employers (beyond those that all programs use to effectively recruit and serve their student, college and employer constituencies). STW refers to School-to-Work projects or partnerships developed under state or federal STW initiatives.

Glossary of Program Characteristics

Co-op Program Information: The institutional and structural characteristics of cooperative education programs at each institution.

Co-op Students: The total number of students engaged in cooperative education employment during the year of the survey. Programs typically work with a larger group of students who are considering co-op, who are preparing for their first work experience, or who have completed one or more work terms but continue to interact with the co-op coordinator. In these profiles, *co-op students* refers to "unduplicated" students, meaning that each student is counted only once even though he or she may have participated in more than one co-op work period during that year. For instance, a student may have worked during the summer, returned to school in the fall, and worked again during the spring term. That student would be counted only once in this data.

Co-op Employers: The number of employers who actually hired one or more co-op students from that institution during the year of the survey. College co-op offices typically have a larger listing of employers who might have available positions during a given year.

Co-op Periods: The length of an individual term during which a student may be on a co-op work experience. Institutions vary in quarter, trimester and semester systems, and they may have a different length of time over the summer. The length of available work time may be significant for employers in their planning.

Fee: A separate fee for participation in co-op or for the services of the co-op office. An entry of "None" indicates that there is not a separate fee for co-op, although students may be paying general tuition or tuition for the credits awarded.

Co-op begins: The earliest term in which a student is typically eligible to participate in co-op.

Co-op established: The year in which the college first established a co-op program.

Min/max terms: The minimum and maximum number of terms that a student must, or may be able to, participate in co-op.

Characteristics: Structural descriptors of the co-op program, including mandatory (required) participation, optional participation, and alternating or parallel scheduling. Alternating--students alternate periods of full-time attendance in academic classes with periods of full-time employment in positions of educational value approved by the institution. Parallel--students attend classes for a segment of the day, and work for a segment of the day, at a position approved by the institution. Students typically work 20 hours/week in a parellel program.

Selective criteria: Requirements for participation in cooperative education that may include academic standing, a minimum grade point average, prerequisite courses, etc.

Academic divisions: The departments or colleges that offer cooperative education as a part of their curriculum.

Alcorn State University
Lorman, MS

Cooperative Education has withstood the test of time and has demonstrated its efficacy in assisting students in clarifying their career interests and aptitudes and in starting them on their career ladder. Historically, career education has enabled Alcorn State University to expand its classrooms into the world of work to benefit participating students. One significant challenge facing cooperative education, as we move into the information age of the twenty-first century, is how to use information technology to effectively expand the world of work into classrooms in order to benefit a significantly larger percentage of our students, as well as the faculty and staff, and how to employ cooperative education as a vehicle to encourage and assist a larger percentage of students to pursue graduate and professional studies, particularly in the sciences, mathematics, and engineering. To address the challenges of the university, cooperative educational employers and graduate and professional schools must work closely together.

Dr. Clinton Bristow, Jr.
President

Program Orientation for Co-op

Students must complete an application and register for a 6-hour credit course. Optional interviewing and resumé seminars are offered.

Institutional Recognition of Co-op

6 credit hours per work term. Credit counts towards the degree.

Integrated Learning Mechanisms

- **Learning contract** is approved by the academic advisor as well as the co-op staff, student, and employer.
- **Midterm and final evaluations** are required. They rely heavily on the worksite supervisor since most experiences are out of state.
- **Student report** is required and is made available to faculty in their academic area.
- **Credit** is awarded through the office of the Academic Vice President.
- **Cluster Taskforces** or Ad Hoc Committees (organized around National Alliance for Business clusters) have operated on campus for 20 years to bridge workplace and academics. They help link the curriculum and the workplace. Co-op employers are drawn from this group and therefore have long-standing relationships with the university. They work with the co-op office on Career Day and Cluster Day activities.
- **Advisory Board** links employers, faculty and student representatives.

New/Special Administrative Practices

- They currently provide placement services to students and alumni without charge. The college is considering a fee, although they like to provide the service to build the sense of community.

Special High School/Employer Outreach

- Co-op literature and the program listing from the previous NCCE co-op directory are distributed to high school students.
- The university's Alumni Placement Task Force provides a network for college placement efforts.

CO-OP PROGRAM INFORMATION: Mr. Al Johnson (601) 877-6324

Institutional Enrollment: 3,000 (2,793 FT)
Co-op Students: 112
Co-op Employers: 20
Co-op periods: 18 weeks/4 months
Fee: None
Co-op begins: Sophomore, first semester
Co-op established: 1973
Min/max terms: 2 min; 4 max.
Characteristics: Optional, alternating
Selective criteria: 2.0 g.p.a./science, good academic standing
Academic Divisions: Agric. & Applied Science; Arts & Sciences; Nursing; Education; Psychology

California Polytechnic State University
San Luis Obispo, CA

As we approach the 21st century, the University is faced with many new challenges. We seek to generate stronger partnerships with industry to ensure our instructional programs are relevant, meet industry needs and remain current with changes in technology. Classroom instruction will continue to be our primary means of educating students. However, it is imperative that we continually explore other learning paradigms.

There is sufficient research and data to indicate that student learning occurs outside the formal classroom. Co-op has been identified as an ideal off-campus learning environment in which partners already exist between University and industry. Can Co-op experience satisfy learning requirements for specific classes, thereby formalizing its role and value in the curriculum and providing new learning environments for students? At Cal Poly, this may include a more formal use of Industry-Sponsored Co-op Projects, Senior Projects, Technical Credit Toward Graduation, as well as promote Professional Exchange Programs and Faculty Exchange Programs.

Dr. Warren J. Baker
President

Program Orientation for Co-op

A one-hour orientation session is required. The student must develop a resumé and cover letter.

Institutional Recognition of Co-op

12 credits for full-time/6 credits for part-time. Credit counts towards the degree for most departments.

Integrated Learning Mechanisms

- **Faculty advisor** approves the work expérience.
- **Professional report** is completed by the student, and includes a technical paper, a history of the company, and task analysis.
- **Weekly progress report** or log is submitted by the student.
- **Quarterly contact** with faculty is maintained for student's verbal report.
- **Debriefing session** with the faculty advisor at the end of the experience is linked to the academic program.
- **Evaluations** are completed by the student and employer.
- **Assessment and student learning outcomes** are an emphasis on campus. Students complete assessments to evaluate learning outcomes—both pre- and post-experiences.

New/Special Administrative Practices

- The office uses Web-based access for students.
- They are exploring ways to formalize and justify outcomes (e.g. to meet ABET 2000), and ways to substantiate ability to meet career requirements through learning in the workplace.
- Career planning is encouraging portfolios for newer students.

CO-OP PROGRAM INFORMATION: Mr. Martin Shibata (805) 756-5726

Institutional Enrollment: 17,000
Co-op Students: 464
Co-op Employers: 225
Co-op periods: 3-6 months
Fee: None (tuition for credits)
Co-op begins: Sophomore, 1st semester
Co-op established: 1968
Min/max terms: 1 min; 4 quarters max
Characteristics: Optional, alternating
Selective criteria: 2.0 g.p.a., sophomore status
Academic Divisions: Agric.; Architecture; Business; Engineering; Liberal Arts; Science & Math

California State Polytechnic University
Pomona, CA

Cal Poly Pomona's Cooperative Education Program will expand its base of small business employers. We will provide greater support services and expand work-integrated learning opportunities not only for junior/senior students but also for sophomore and freshman-level students. We seek to develop more partnerships with industry globally that will provide resources to Cal Poly Pomona, a value-added education for all our students, and well-prepared graduates for business and industry.

Dr. Bob H. Suzuki
President

Program Orientation for Co-op

There is a required orientation session (one session, informal structure). Optional Career Center workshops are offered.

Institutional Recognition of Co-op

Approximately 90% of co-ops receive academic credit (2-4 credits/term for full time; 1-2 credits for part-time). The amount varies by department.

Integrated Learning Mechanisms

- **Credit for co-op** is awarded by faculty, dependent on department policy. Co-op director is a faculty member and awards credit in own discipline.
- **Job descriptions** are distributed to a network of faculty coordinators.
- **Student reports** are required during the first and second quarters of co-op. The reports are read by the co-op director and faculty, and receive a letter grade.
- **Oral presentations** are given by third-quarter students at a university seminar. Company representatives are invited and the session is videotaped. For fourth quarter and beyond, students complete a written or oral presentation.
- **Senior project/research project** may be related to co-op and carried out at the worksite.

Special High School/Employer Outreach

- High school and middle school teachers and student groups tour the campus through science education grants. A presentation on co-op is often a part of the program.
- The university is strengthening alumni ties and involving them in mentoring, job shadowing, and pre-co-op experiences. They have been more successful at tracking graduates who were co-ops than those that weren't.
- Co-op alumni present guest lectures in classes.

CO-OP PROGRAM INFORMATION: Dr. Ernest Simpson, Director, 909-869-3671

Institutional Enrollment: 17,000 (12,000 FT)
Co-op Students: 400
Co-op Employers: 200
Co-op Periods: 3 or 6 months
Fee: None
Co-op begins: Junior (Soph. w/prereqs)
Co-op established: 1978
Min/max terms: 1 min; 8 max
Characteristics: Optional, mostly parallel, FT summer
Selective criteria: 2.5 g.p.a. (w/ exceptions), good academic standing
Academic Divisions: Agriculture, Arts; Hosp. Mgmt; Business; Engineering; Environmental Design; Science

Central Connecticut State University
New Britain, CT

Central Connecticut State University's Cooperative Education Program will continue to provide both leadership to our University in identifying skills students will need to acquire to be successful in the world of work; and creating activities and opportunities that enable students to acquire those skills as a part of their learning experiences at our University.

Dr. Richard L. Judd
President

Program Orientation for Co-op

A one-credit Career Seminar is required, taken the semester before the first work experience. The 9-week course is taught by co-op staff, includes a co-op text book, and covers self-awareness, job search and workplace skills, and how to research occupations.

Institutional Recognition of Co-op

There is a transcript notation for co-op. No credit is awarded in most departments. Two departments award credit (3-6) for required experience or project.

Integrated Learning Mechanisms

- **Career Seminar** is taken before the student's work experience.
- **Co-op textbook** helps to link student career and education goals.
- **Informal links between staff and faculty** include staff presentations in classes and some faculty teaming with staff for job development.
- **Faculty newsletter** from Co-op and Career Services is a new publication and includes faculty examples of experiential education in their own development.
- **Pilot Portfolio Project** was initiated by the university. 150 students are participating in this formalized and academically-driven project organized by faculty. Co-op experiences will be included in portfolios.

Special High School/Employer Outreach

- University outreach begins with the pre-high school level. The university also targets the large minority population in the surrounding area.

CO-OP PROGRAM INFORMATION: Ms. Pat Havel (860) 832-1630

Institutional Enrollment: 13,000 (6,500 FT)
Co-op Students: 366
Co-op Employers: 150
Co-op periods: 24 weeks
Fee: $400 over two semesters
Co-op begins: Sophomore , 2nd semester
Co-op established: 1973
Min/max terms: 1 min; 4 max
Characteristics: Optional, alternating
Selective criteria: 2.0 g.p.a., 45 credits earned, good academic standing
Academic Divisions: Arts & Sciences, Business, Technology

Central Piedmont Community College
Charlotte, NC

Cooperative Education is one of our premier partnerships between business and industry and is a critical dimension of the mission of CPCC. Co-op supports our mission by integrating the classroom with real world work experiences to prepare students for productive and rewarding jobs.

Our challenges at CPCC and for the Co-op Program include adjusting to the ever-changing needs of our global community and remaining flexible with the technological advances that are happening at such an incredible rate. We must also involve business and industry to increase their responsibility in solidifying partnerships which educate and train our workforce.

Dr. P. Anthony Zeiss
President

Program Orientation for Co-op

Students have group or individual orientations. Students must meet with co-op staff and their faculty coordinator before going on co-op. Optional workshops are available on job search skills. The World of Work is a new course available, emphasizing workplace survival skills.

Institutional Recognition of Co-op

1-2 credits per term, up to a maximum of 4 credits. The credit counts towards the degree. Apprenticeship curriculum (new) allows up to 8 credits for co-op.

Integrated Learning Mechanisms

- **Co-op staff and faculty coordinators** meet with students three times during the work experience.
- **Structure of integration with learning** varies by department. Engineering and Human Services have a required 1-2 credit-hour seminar which meets two days/week for the semester.
- **Learning objectives** are developed and approved by the employer, faculty and student.
- **Co-op workbooks** are used by students.
- **New state FTE and curriculum policies** have expanded co-op's role. Up to two credit-hours of co-op are now available in continuing education courses. Licensing courses have added work experiences, and practicum requirements call for more depth, evaluation and monitoring in work experiences. Co-op has expanded into Human Services, licensing programs and apprenticeship programs.

Special High School/Employer Outreach

- The college is articulating with the public school system. High school co-op or apprenticeship students who are referred by the high school can begin co-op at the college without waiting.
- The college is integrating Co-op and Tech Prep.
- Co-op recruiter for Transportation Systems Technology covers a three-state area.
- Short-term training courses and certifications (through Job Link) offer co-op work experiences.

CO-OP PROGRAM INFORMATION: Ms. Sandra Lare (704) 330-6217

Institutional Enrollment: 62,000 (17,000 FT) | **Co-op Students**: 450 | **Co-op Employers**: 306
Co-op periods: 16 weeks | **Fee:** None | **Co-op begins:** Freshman (after 15 cr. hrs.)
Co-op established: 1984 | **Min/max terms:** 1 min, 4 max.
Characteristics: Mandatory & Optional, altern. & par. | **Selective criteria:** Faculty determined, Placement test scores, g.p.a.
Academic Divisions: Acctg & Public Safety; Advertising Design; Allied Health; Behavioral & Social Sciences; Business Admin.; College Transfer; Computer & Office Info Systems; Corp. & Continuing Ed.; Engineering; Hospitality; Human Services; Physical Education; Public Safety; Tech. Careers

Cincinnati State Technical & Community College
Cincinnati, OH

Cooperative Education has been and will continue to remain a cornerstone of the College's mission and its curricula. One of our main goals is to continue the fostering of collaborative relationships and building partnerships with employers that provide applied learning opportunities for our students. As we seek improvements in the cooperative learning processes, the identification of learning objectives and assessment of the co-op experience will be at the forefront of future efforts. Our challenge lies in the development of the learning team, student-co-op coordinator-employer, who will determine whether the desired skills and competencies are attained during the cooperative learning experiences.

Dr. Ron D. Wright
President

Program Orientation for Co-op

An orientation seminar is required (varies from one hour to multiple sessions, depending on the department). Students also work one-on-one with their coordinator.

Institutional Recognition of Co-op

2 credits per term. Credit counts towards the degree.

Integrated Learning Mechanisms

- **Co-op coordinators are tenure-level faculty** and housed within their academic divisions. They serve on departmental committees.
- **Faculty and coordinators** work together on evaluating new employment sites and identifying key criteria for acceptable co-op positions.
- **Post-experience activities** vary among departments. Some require a student report, evaluations, or a meeting with the co-op coordinator.
- **Departmental faculty** receive a list of co-op students and their employment sites.
- **Credit** is awarded by co-op coordinator faculty.

New/Special Administrative Practices

- They have an individualized system that is tailored by co-op faculty.

Special High School/Employer Outreach

- The college has some Tech Prep arrangements to allow some 12th graders to come to the college and begin co-op earlier in their academic program.

CO-OP PROGRAM INFORMATION: Ms. Monica Posey, (513) 569-1501

Institutional Enrollment: 5,700 (1,800 FT)
Co-op Students: 1940
Co-op Employers: 400
Co-op periods: 10 weeks
Fee: None
Co-op begins: Freshman, 2nd semester
Co-op established: 1967
Min/max terms: 1 min; 5 max
Characteristics: Optional, mostly parallel
Selective criteria: 2.0 g.p.a., on track with curric., admitted to acad. prog.
Academic Divisions: Business; Engineering, Tech; Health, Humanities & Sciences

Clarkson University
Potsdam, NY

At Clarkson we strive to prepare leaders, not just graduates. To accomplish this we provide an undergraduate education rich in "hands-on," real-world problem solving. For many students cooperative education is the ideal way to gain more real world experience, which enriches their undergraduate education.

Dr. Dennis G. Brown
President

Program Orientation for Co-op

There is a structured orientation meeting. Students must participate in a series of workshops on job search and workplace skills. Co-op students meet with academic advisors to arrange their academic schedules.

Institutional Recognition of Co-op

There is a transcript notation of co-op participation. No course credit is awarded.

Integrated Learning Mechanisms

- **On-site evaluations** are completed by students and employers. There is both an initial and a final evaluation.
- **Linkage with faculty** is strengthened by faculty participation on the Co-op Advisory Board.

CO-OP PROGRAM INFORMATION: Mr. Arthur Siebert (315) 268-6578

Institutional Enrollment: 2,416 (2,348 FT)
Co-op Students: 75
Co-op Employers: 25
Co-op periods: 24 weeks
Fee: None
Co-op begins: Junior, 1st semester
Co-op established: 1982
Min/max terms: 1 minimum
Characteristics: Optional, alternating
Selective criteria: 2.5 g.p.a., with exceptions
Academic Divisions: School of Engineering, Science, Business, Liberal Arts

Drexel University
Philadelphia, PA

Drexel University is committed to continuous improvement of its co-operative education services to students. One such example is the new "Still-deciding Student" ™ program, where students initially enroll in the College of Arts and Sciences to fulfill first-year liberal arts requirements. During this time they benefit from academic advising by College faculty as well as their participation in the University Seminar, an ongoing orientation to college life, which introduces them to the full range of majors and minors offered at Drexel. They also take "Co-op 101," a course where they learn the process of choosing a profession, and get vocational assessment and counseling from Drexel's Career Management Center. Finally, the new program integrates academic advising with co-op during the sophomore year through a work experience that plays an invaluable role in helping a "Still-deciding Student"™ to focus on a field of study.

Dr. Constantine N. Papadakis
President

Program Orientation for Co-op

There is a required orientation course (10-hrs over 1 quarter), taught by co-op staff with assistance from teaching faculty. The course covers policies, transition issues, job search skills, etc., and includes simulated selections from sample jobs, applications and interviews.

Institutional Recognition of Co-op

Drexel Cooperative Units are awarded, with a maximum of 2 units/experience (amount varies by program). To graduate with a Co-op designation, students must have a minimum of 1 year of experience. For an Internship designation, they need a minimum of 6 months.

Integrated Learning Mechanisms

- **Employment Summary and Planner** is completed by students to document work experience. It summarizes supervision, positive and negative aspects, and how the experience will impact their next 6 months in school and their next co-op position. It is also used as a quality control of the position
- **Faculty linkage** of co-op to the classroom varies by department. The College of Business has a seminar for reflection on the experience.
- **Presentation Course** is being considered as a capstone to co-op experiences and to relate co-op to career plans for the future.
- **Capstone projects** are offered in most programs. Many are linked to a co-op position.

New/Special Administrative Practices

- The office uses Optimal Pairing Program to match student and employer top choices after interviews. This allows students to see all options at once by knowing the employers' interest in the student for a job offer or as a qualified alternate.

Special High School/Employer Outreach

- They conduct outreach to students (particularly those undecided about a major) as the Ultimate Internship™, using co-op to identify their best choices about what they want to do after college. The freshman class has almost doubled in two years.

CO-OP PROGRAM INFORMATION: Mr. Gary Hamme (215) 895-2902

Institutional Enrollment: 11,000 (6,290 FT) | **Co-op Students**: 2251 | **Co-op Employers**: 1800
Co-op periods: 24 weeks | **Fee:** None | **Co-op begins:** Sophomore, first semester
Co-op established: 1919 | **Min/max terms:** 2 min (Engin. & Info. Sci.), 1 min (rest); 3 max
Characteristics: Mandatory & optional; alternating | **Selective criteria:** Active student status, good academic standing
Academic Divisions: Arts & Sciences, Business & Administration, Design Arts, Engineering, Information Science & Technology

El Paso Community College
El Paso, TX

El Paso Community College's (EPCC) Co-op students have a 42% graduation rate compared to less than 5% of entering students. Retention is an important part of our Co-op Program. Our challenges are to make this program more attractive to the faculty and to business leaders. Co-op is a comprehensive program compared to other partnerships as it is intended to prepare the student for immediate employment upon graduation.

Cooperative Education was initiated in 1979 at EPCC, however, the program is just a beginning in developing stronger partnerships with business, industry and government at all levels of learning. The challenge to Cooperative Education will be to keep the formal co-op academic credit program at a high priority for faculty who have many other partnership opportunities.

Dr. Adriana Barrera
President

Program Orientation for Co-op

Students register for a co-op class with a faculty member. The central office runs optional workshops on the job search process, workplace skills, sexual harassment and equal opportunity employment.

Institutional Recognition of Co-op

6-9 credit hours total. Credit counts towards the degree but is not transferable to 4-year institutions. Some work experiences are non-credit.

Integrated Learning Mechanisms

- **Faculty Coordinator Model**—Co-op coordinators are members of the teaching faculty. Academic advising and co-op counseling overlap.
- **Faculty members teach a co-op class**, meeting 1/week for 16 hours over the semester.
- **State Coordinating Board Technical Guidelines** require a training plan, evaluation, etc. for co-op work experiences.
- **Orientation sessions for new faculty coordinators** are given periodically and on a one-to-one basis.

New/Special Administrative Practices

- The director received an internal improvement grant to coordinate all external work experience programs on campus and to clarify legal responsibilities.
- Co-op office is combined with Job Placement and has close ties to Resource Development.
- Flexible operation allows some summer entry and non-credit co-op.
- Rapid Response System is used to meet employer needs.

Special High School/Employer Outreach

- Director serves on Tech Prep Advisory Board and as liaison to One-Stop Career Center sponsored by the Texas Workforce Commission.
- Informal linkages allow direct entry into co-op after high school. They also have articulation with the state 4-year college for some transferring students.

CO-OP PROGRAM INFORMATION: Dr. Harvey Ideus (915) 594-2638

Institutional Enrollment: 21,000 | **Co-op Students**: 451 | **Co-op Employers**: 220+
Co-op periods: 16 weeks (10 weeks in summer) | **Fee:** None | **Co-op begins:** Sophomore
Co-op established: 1979 | **Min/max terms:** 1 min; 2 max
Characteristics: Mandatory & optional; mostly parallel | **Selective criteria:** 2.75 g.p.a.
Academic Divisions: Occupation Education; Business & Management, Criminal Justice, Legal Assistant

Georgia Institute of Technology
Atlanta, GA

As the Accreditation Board for Engineering and Technology (ABET) transforms its accreditation criteria to standards based on outcomes assessment, cooperative education at our institution becomes an even more attractive program for our Deans, School Chairs and students, as it provides a means for students not only to absorb new technical knowledge, but to demonstrate the application of theories learned in the classroom. The opportunities for a more diversified, liberal education where students can make positive impacts on their communities and society as a whole are greatly enhanced by participation in co-op at Georgia Tech. We face a very formidable challenge in the future in our attempt to keep pace with changing technology and the increased globalization of post-secondary education, but we are committed to offering our students the highest quality of experiences possible to enhance their learning and ultimately, their careers.

Dr. G. Wayne Clough
President

Program Orientation for Co-op

Co-op Student Handbook must be read and signed. There is a mandatory 2-hour orientation session. Students are required to have individual sessions with their co-op advisor. Optional interviewing skills workshops are offered.

Institutional Recognition of Co-op

There is a transcript notation. Students must register for a non-credit, non-fee grade. There is a co-op designation on the diploma as a Cooperative Plan Degree. Students must have worked required number of quarters. These students have a special, separate recognition in the program at the commencement ceremony (Approx. 60% of co-op students complete this).

Integrated Learning Mechanisms

- **Student report** is required, summarizing activities and goals. It stays on file in the co-op office. They are changing the report to address the ABET 2000 goal of assessing long-range outcomes.
- **Liaison (undergraduate faculty advisor)** receives a list of co-op students and their worksites.
- **Committee on curricular issues for engineering** includes the co-op director. This also helps the director to relay employer views to teaching faculty.
- **Evaluation** by worksite supervisor includes measures relevant to ABET 2000.

New/Special Administrative Practices

- Job positions are posted on the mainframe, allowing students access from their dorm rooms. Information will soon be accessed from the office's website.
- New staff position provides a full-time coordinator for students seeking international experience.

Special High School/Employer Outreach

- Co-op presents information at all special programs where prospective students (and parents) visit the campus.
- Co-op holds an annual Career Fair for employers with worksites in the state.
- They started a model project with a major corporation wanting to expand its Summer Challenge Program. Professors consulting with the corporation assign co-op students to multi-discipline teams at the worksite, and the next term students continue the work back on campus.

CO-OP PROGRAM INFORMATION: Mr. Tom Akins (404) 894-3320

Institutional Enrollment: 14,041 (13,089 FT) | **Co-op Students**: 2418 | **Co-op Employers**: 630
Co-op periods: 12 weeks | **Fee:** None | **Co-op begins:** Freshman, 2nd quarter
Co-op established: 1912 | **Min/max terms:** 6 qtrs. min, 4 qtrs. min (arch.), 2 min (graduate)
Characteristics: Optional, alternating | **Selective criteria:** 2.0 g.p.a., good academic standing
Academic Divisions: Architecture, Computing, Engineering, Management, Public Policy, Sciences

Kettering University (formerly GMI Engineering & Management Institute)
Flint, MI

An increasing number of our corporate partners are stressing the importance of the global economy and emphasizing the need for international experience for their technical and managerial talent. Many of our co-op students are being sent overseas for a work term, adding greatly to their career potential with the sponsoring company. We feel that international cooperative education provides us a great opportunity. Kettering has developed exchange agreements with foreign universities that enable our students to study abroad for a term and thereby gain experience living in a foreign country and appreciating a foreign culture. We would like all of our students at Kettering to have the opportunity to work or study abroad during their academic career.

Dr. James E. A. John
President

Program Orientation for Co-op

Part of the orientation is done through the admissions process in the field due to Kettering's arrangement for some entering freshmen to co-op during their first semester. There is a required one-credit freshman orientation course covering interviewing, resumés and workplace skills.

Institutional Recognition of Co-op

Co-op is mandatory in the academic program. No course credit is awarded.

Integrated Learning Mechanisms

- **Employers** are true partners and a key base of the academic program. An employer local to the student's home may be identified before the student arrives on campus.
- **Student and employer evaluations** of the work experience are required.
- **Completion of five successful co-op terms** is required, three after becoming a junior. The student must have received a passing evaluation from the employer for each experience.
- **Masters-style thesis** is based at the worksite. In fifth year, the student spends three quarters working on the thesis at the worksite. Faculty advisors oversee and grade.
- **Increased linkages** are planned through written work or journals for the student to complete during the work term. They are considering making the student's evaluation of the employer mandatory.

New/Special Administrative Practices

- The university uses computerized matching for employers and incoming freshmen. There is intensive work in the field before students are even on campus, including research of companies and students' interests.

Special High School/Employer Outreach

- The university's system is based on high school outreach. They begin work with seniors in October or November, using the web, mail, and local visits. Some are matched with work sites by the December before they attend.
- New admissions recruiting sessions are being piloted (particularly in larger cities). Sessions are sponsored by major employers and increase the involvement of alumni and students in the recruiting process.
- The co-op department is piloting Partners in Learning Conferences—one-day sessions for employers to teach them about co-op and provide tools for running a program.

CO-OP PROGRAM INFORMATION: Mr. Garth Motschenbacher (810) 762-7867

Institutional Enrollment: 3,320 (2,500 FT)
Co-op periods: 12 weeks
Co-op established: 1919
Characteristics: Mandatory, alternating
Academic Divisions: Engineering, Business Science
Co-op Students: 2400
Fee: None (it's part of tuition)
Min/max terms: 7 min (5 work & 2 thesis); 11 max
Selective criteria: Good academic standing
Co-op Employers: 705
Co-op begins: Freshman

LaGuardia Community College
Long Island City, NY

Given the rapidly changing nature of today's workplace, cooperative education as a learning strategy to prepare our graduates for the 21st century is more important than ever before. While there are expanded opportunities today for co-op placements, the key challenge in my view will be to develop stable long-term alliances with the employer community.

Dr. Raymond C. Bowen
President

Program Orientation for Co-op

Orientation includes a required, 1-credit, 12 semester-hour course--Gateway to the Workplace. Topics include the evaluation of skills, accomplishments and goals, and the college recently increased elements on workplace skills, entrepreneurial strategies and computer sophistication. Students meet individually with a Co-op Faculty Advisor.

Institutional Recognition of Co-op

1 hour credit for introductory course. During work terms, students receive 2 credits, 1 semester-hour for part-time (15-20 work hours); 3 credits, 1 semester-hour for full-time (25-40 work hours).

Integrated Learning Mechanisms

- **Nine "Sources of Learning"** identified by Division of Cooperative Education includes an introductory course, meetings with co-op faculty advisors, Internship Seminar, work environment job tasks, learning objectives, co-workers, work site, and coordinator site visit.
- **Learning objectives** are set by the student and co-op faculty advisor.
- **Internship seminar** is a 6-week, required course taken in conjunction with work experience.
- **New programs in Entrepreneurialism and Co-op** have been established. Project Pushcart is a retail operation with the Business Division. Additional seminars in Humanities and Technology are being developed.

New/Special Administrative Practices

- Co-op department surveys graduates 6 months after graduation and the office recently completed a longitudinal study.

Special High School/Employer Outreach

- There are three on-campus high schools focusing on at-risk students, recent immigrants, and a New Vision school.
- High school students in 11th and 12th grades can enroll in college courses.
- The college has a Goals 2000 grant to assist integrating technology and workplace skills into the classroom.
- The college is the lead agent in the local School-to-Work partnership and is participating in a New York college consortium for an Education Commission of the States project linking higher education to STW.

CO-OP PROGRAM INFORMATION: Dr. Harry Heinemann (718) 482-5200

Institutional Enrollment: 11,000
Co-op Students: 1274
Co-op Employers: 895
Co-op periods: 11-13 weeks
Fee: None
Co-op begins: Freshman, 2nd semester
Co-op established: 1971
Min/max terms: 2 min; 3 max
Characteristics: Mandatory alternating & parallel
Selective criteria: Good academic standing
Academic Divisions: Business; Computer Information Systems, Liberal Arts & Sciences, Office Technology

Lane Community College
Eugene, OR

The Lane Community College faculty have initiated a re-design of instruction, based on the latest research and findings about the learning process. Because these findings demonstrate the value of experience-based learning, our cooperative education program will serve as a model and a source of expertise for our faculty planners.

Dr. Jerry Moskus
President

Program Orientation for Co-op

Students must have demonstrated knowledge in their field. There is a required orientation process for a few departments. Optional workshops on job search and workplace skills are offered.

Institutional Recognition of Co-op

Credit is awarded (up to a total of 36 hours). A maximum of 18 credits can count towards degree.

Integrated Learning Mechanisms

- **Co-op faculty** are housed in departments and have teaching faculty status.
- **Co-op faculty and teaching faculty** collaborate to design student schedules.
- **Learning objectives** are set by the student, co-op coordinator and employer.
- **Teaching faculty** assist with goals and objectives for students in an informal process.
- **Evaluations** are completed by the coordinator and employer.

Special High School/Employer Outreach

- State Education Reform is facilitating linkages and transitions between high schools and postsecondary institutions.
- Lane has taken an active role in Educational Reform through School-to-Work linkages with high schools.
- The college houses a high school on campus.
- Co-op director developed and delivered technical workshops in 9 states through a School-to-Work Grant awarded to the college.

CO-OP PROGRAM INFORMATION: Mr. Bob Way (541) 726-2203

Institutional Enrollment: 9,600 **Co-op Students**: 2018 **Co-op Employers**: 710
Co-op periods: 12 weeks **Fee:** None (tuition for credits) **Co-op begins:** Freshman, 2nd semester
Co-op established: 1970 **Min/max terms:** 1 min; 6 max
Characteristics: Mandatory & optional, mostly parallel **Selective criteria:** Selected the major and taking classes in that field
Academic Divisions: Business & Computer Technology, Electronics and Drafting, English, Foreign Languages, Graphic & Performing Arts, Health, Food & Hospitality, Physical Education, Industrial & Media Arts Technology, Math, Science, Social Science

Long Island University
Brooklyn, Brookville (C. W. Post), & Southampton, NY

Cooperative Education at Long Island University enhances the academic experience with meaningful student development in the workplace. It extends our campuses to include the business community, providing learning that cannot be duplicated in the classroom. Commitment to professional work experience for all our students is a major component of the Long Island University Plan, which distinguishes our undergraduate program from the abundant other colleges on Long Island and the New York metropolitan region.

Dr. David J. Steinberg
President

Program Orientation for Co-op

Freshman orientation includes a visit or presentation on co-op. There is a required orientation seminar or workshop series. (Bkln-Orientation Seminar II, a 1-credit, semester course taught by co-op staff, or by faculty who have gone through training. Can be waived by director. Students must submit two faculty references for co-op). (Post- 7-week Experience Enrichment Education course, meeting 2/week) (Southampton [SH] 5-session pre-experience workshop series).

Institutional Recognition of Co-op

There is a transcript notation, including the co-op company name. Both credit and non-credit co-op are offered, varying by campus and department.

Integrated Learning Mechanisms

- **Co-op is a stated part of the mission** of the university, providing students with pre-professional work experience.
- **Learning mechanisms** vary by campus and department.
- **Learning agreement** is developed with faculty or academic advisor approval (Bkln & SH). It covers responsibilities, areas of learning, and relationship to academic studies.
- **Co-op student handbook** assists in the integration of academic work with practical applications. (SH)
- **Co-op Paper** is written by students and graded by faculty (SH).
- **Optional integrative seminar** (3-credits) is offered to process learning for current or past co-op work experiences. An optional formalized, 1-hour debriefing session is offered 3 times/year. (Bkln)
- **Evaluations** are completed by the student and employer.
- **Faculty linkages** include receiving a list of co-op students and positions, participation on the co-op Advisory Board, and a faculty reception (Post & SH). The co-op office includes a faculty liaison (Bkln) or a faculty sponsor (SH).

New/Special Administrative Practices

- Co-op & Career Placement have combined career development services.
- Southampton offers a co-op loan that is forgiven when the student graduates.

Special High School/Employer Outreach

- All new, in-coming students are sent a letter from the co-op office. (Post)
- Brooklyn campus has a LIU Plan to bridge with local high schools, exposing students to academia, and co-op provides career assessment and workshops.

CO-OP PROGRAM INFORMATION: Laura McKaie 718-488-1039 (Bkln); Jeanette Grill 516-299-2435 (Post); John McCrudden 516-283-8274 (SH)

Institutional Enrollment: 18,213 (3 campuses) **Co-op Students**: 592 **Co-op Employers**: 450
Co-op periods: 12-15 weeks **Fee:** None **Co-op begins:** Fresh 2nd sem. or soph. 1st
Co-op established: 1979 **Min/max terms:** 1 min; max varies by campus
Characteristics: Mand. (few), optional; mostly parallel **Selective criteria:** Soph. status, good acad. standing, some have min. g.p.a.
Academic Divisions: Accounting, Arts & Sciences, Education, Management, Visual & Performing Arts (Post); Business Administration, Computer Science, Allied Health (Brooklyn); Arts & Media, Business, Education, Natural Science, Social Science (Southampton)

Macomb Community College
Warren, MI

We should help students understand the 'pleasant paradox' of cooperative education: While a co-op program may sometimes lengthen the time it takes to complete a degree on campus, it almost always shortens the time it takes to get ahead in the workplace.

One of our most pressing challenges facing our institutions is the recruitment and development of the next generation of leaders for cooperative education programs.

Dr. Albert L. Lorenzo
President

Program Orientation for Co-op

Students meet with Co-op Coordinators. Video presentations provide a broad overview of co-op. A pre-interview seminar for all students includes an interviewing handbook, workbook and video interview tape.

Institutional Recognition of Co-op

12 academic credits are awarded. A Certificate of Cooperative Education is awarded along with the Associate Degree.

Integrated Learning Mechanisms

- **Co-op faculty members** are tenured by institution and hold academic rank.
- **Credit** is awarded by co-op faculty.
- **Weekly seminar** is required for students while on co-op, conducted by co-op faculty. Video and self-learning assignments are provided to out-of-town students.
- **Academic faculty members** participate in on-site visitations.
- **Work site supervisors** provide two evaluations per term. (This is a required element of the program).
- **Supervisor handbook** is provided to each company to be used in outlining policy and operating procedures.
- **Work reports and evaluations** are submitted to faculty advisors.
- **Co-op Advisory Committee** of faculty, employers, former co-op students and college administrators provides guidance and future planning activities.

New/Special Administrative Practices

- A program of articulated co-op transition from high school to community college to university has been developed.
- The college is piloting a reconfigured alternating plan of Monday, Wednesday, Friday at work and Tuesday, Thursday, Saturday in school.
- A specific scholarship is available for students participating in co-op.

Special High School/Employer Outreach

- The college closely responds to local employment needs, particularly the second-shift employment needs of automotive engineering design.
- The college has well-established linkages with high schools. They have special programs with high schools in certain career areas. Faculty visit high schools. The college holds a Parent's Night for high school students and parents to meet with sponsoring companies, faculty and co-op students.
- Tech Prep articulation agreements and integration with co-op have been in place for many years.
- They have linkages with STW, including a grant project for CAD students.

CO-OP PROGRAM INFORMATION: Mr. Paul Gould (810) 445-7431

Institutional Enrollment: 25,000 (5,500 FT) **Co-op Students**: 600 **Co-op Employers**: 243
Co-op periods: 16 weeks **Fee:** $18(lab fee)(Tuition for crdt) **Co-op begins:** Sophomore, first semester
Characteristics: Optional, predominantly alternating **Selective criteria:** 2.0 g.p.a., 12 credit hrs. in related program
Co-op established: 1964 **Min/Max terms:** 1 min, 3 max.
Academic Divisions: Business, Public Service, Industrial Tech, Design Tech

North Carolina State University
Raleigh, NC

In support of North Carolina State University's mission as a land grant university, the Cooperative Education Program augments the academic preparation of undergraduate and graduate students by providing relevant, high quality work experiences. The University's location in the Research Triangle strengthens corporate partnerships and enhances the global education of our cooperative education students. N.C. State University's Cooperative Education Program has come to be nationally recognized by employers, students and peer institutions for the excellent experiences it provides students.

Dr. Larry K. Monteith
Chancellor

Program Orientation for Co-op

A 1-hour orientation session is required. Students must meet with a co-op coordinator. Optional workshops on job search and workplace skills are offered.

Institutional Recognition of Co-op

There is a transcript notation for co-op and a certificate of program completion. No credit is awarded.

Integrated Learning Mechanisms

- **Students must meet with their academic advisors** before meeting with co-op coordinators. After co-op orientation, students meet with academic advisors to plan curriculum.
- **Evaluation forms** are completed by faculty after the work experience, covering students' applied knowledge, relationship to major, attitude, etc.
- **Students do self-assessment** each session **and meet with their co-op coordinator** to review outcomes, student self-assessment and employer evaluations.
- **Co-op Student Survey** covering reasons for doing co-op, satisfaction, benefits, and experience is conducted by co-op office. Survey results are distributed to academic departments.
- **Coordinators of Advising** meet regularly and receive reports on co-op.
- **Faculty open houses** are held by co-op department. Faculty members new to co-op are invited for an introduction to program.

New/Special Administrative Practices

- Web-based system provides for student access.

Special High School/Employer Outreach

- Outreach to geographically close high schools has increased in the last two years, including presentations on career choices.

CO-OP PROGRAM INFORMATION: Dr. William Weston (919) 515-2300

Institutional Enrollment: 27,537 (18,674 FT) | **Co-op Students:** 1103 | **Co-op Employers:** 317
Co-op periods: 12 weeks | **Fee:** $338/FT; $169/PT | **Co-op begins:** Sophomore , first semester
Co-op established: 1969 | **Min/max terms:** 12 months min for alternating; 24 mo. for parallel
Characteristics: Optional, alternating, (4% parallel) | **Selective criteria:** 2.25 g.p.a.
Academic Divisions: Agric. & Life Sciences; Design; Education & Psychology; Engineering; Forest Resources; Humanities & Social Sciences; Physics & Math Sciences; Management; Textiles

Northeastern University
Boston, MA

The most significant challenge confronting cooperative education at Northeastern University lies in developing a comprehensive strategy to fully integrate our students' classroom and work experiences. While this poses our greatest challenge, it also provides an unparalleled opportunity to take the lead in addressing this issue so critical to the future of Cooperative Education.

Other strategic opportunities and challenges lie in the realm of research and training. There is a paucity of high quality research data relative to Cooperative Education, especially with respect to its educational outcomes. Further, there exists a dire need for training in the field, both at the national and international level, on the part of the educational, governmental and private sectors.

Dr. Richard M. Freeland
President

Program Orientation for Co-op

Orientation to co-op is required, and varies by department. Students must meet with their co-op coordinator and attend preparatory sessions. Optional workshops on job search and workplace skills are offered. Students receive a co-op handbook. Earlier outreach comes through presentations during freshman orientation sessions for both students and parents.

Institutional Recognition of Co-op

1 credit/term (P/F) co-op credit is awarded. Co-op is mandatory in most colleges.

Integrated Learning Mechanisms

- **Cooperative Education Learning Model** is used, outlining experiential learning credit through the completion of the Preparation, Activity, and Reflection components.
- **Reflection component's mechanisms** vary by departments, but may include journals, faculty conferences, assessments, debriefing sessions, analysis papers, public presentations or individual or group projects.
- **Co-op faculty and teaching faculty** are team-teaching courses in some disciplines. The College of Business offers a combined course with one quarter in the classroom and one quarter on co-op, with a team-taught seminar.
- **Internet interaction** is being piloted among student, employer, co-op coordinator and teaching faculty for students at a distant worksite.
- **Evaluations** are completed by the student, coordinator and employer

New/Special Administrative Practices

- Team teaching by co-op and teaching faculty is being explored.
- Co-op faculty is working with teaching faculty to incorporate work experience into the classroom.
- The university has an ACE project to develop skills and competencies across units.
- Deans of the colleges are working on establishing faculty rewards.
- Co-op is developing a more user-friendly database for students, employers and college.

Special High School/Employer Outreach

- Urban university connects to public schools through scholarship and advisory programs.
- Some colleges are partnering with companies to employ faculty & students, & to continue work experience projects in the classroom. Individual 2+2+2 agreements in selected areas.
- Co-op is working with employers on resumé forecasting to identify the skills needed and how to incorporate those into the academic curriculum.

CO-OP PROGRAM INFORMATION: Dr. Kristin Woolever (617) 373-5775

Institutional Enrollment: 24,605 (13,590 FT) | **Co-op Students**: 5808 | **Co-op Employers**: 2000
Co-op periods: 13 or 26 weeks | **Fee:** None | **Co-op begins:** Sophomore, 1st quarter
Co-op established: 1909 | **Min/max terms:** 4 min (engineering), 6 max
Characteristics: Mandatory except Arts & Sciences | **Selective criteria:** Not on academic probation
Academic Divisions: Arts & Sciences, Business Administration, Computer Science, Criminal Justice, Engineering & Engineering Technology, Health Sciences, Nursing

Pace University
New York, NY

The mission of Pace University focuses upon preparation for the professions and life in a rapidly changing world. One of the best ways in which the University fulfills that mission is by combining theory and practice in the professional richness of New York through our Cooperative Education program. Pace's talented students apply what they have learned in the classroom in the laboratory of challenging workplace settings. The results are better prepared alumni who are successful in the job market and who become the mentors and employers of the next generation of Pace students.

Dr. Patricia O. Ewers
President

Program Orientation for Co-op

There are mandatory orientation workshops (2 sessions) for co-op students. Students receive a co-op handbook and meet with their co-op coordinator.

Institutional Recognition of Co-op

There is a transcript notation of successful completion of the co-op experience. Credit may be earned through academic departments.

Integrated Learning Mechanisms

- **Co-op student handbook** includes elements to integrate the work experience into the student's academic program.
- **Learning objectives** are discussed with the student, employer and co-op coordinator.
- **On-site visits** are conducted by the co-op coordinator for the student and supervisor to evaluate the work experience.
- **Evaluations** are completed by the student and the employer, and are related to skill development, experience and program of study.
- **Co-op director and staff** meet regularly with deans, faculty and academic advisors.

New/Special Administrative Practices

- Director surveys incoming freshmen and transfer students to assess the awareness/influence of co-op in selecting the university.
- Data and reports on positions, salaries and career outcomes are distributed to university administration, deans, faculty and Board of Trustees.
- Co-op and Career Services Department was given the first annual award for outstanding support of the university's mission.

Special High School/Employer Outreach

- Staff members teach a Career Development and Co-op section of University 101, a semester-long orientation course for freshmen.
- The Executive Director is active with joint-county School-to-Career (STC) Partnership. She co-wrote two workbooks on job search skills & career development, presented at Institutes for STC in county school districts, and serves on the Executive Committee for local STC partners.

CO-OP PROGRAM INFORMATION: Ms. Joan Mark, (914) 773-3572

Institutional Enrollment: 13, 517 (6,406 FT) | **Co-op Students**: 1100 | **Co-op Employers**: 572
Co-op periods: 12 weeks | **Fee:** None | **Co-op begins:** Sophomore, first semester
Co-op established: 1979 | **Min/max terms:** 2 min; 4+ max
Characteristics: Optional; alternating & parallel | **Selective criteria:** 2.5 g.p.a./undergrad; 3.0 g.p.a./grad
Academic Divisions: Arts and Sciences; Business; Computer Science/Information Systems, Education, Nursing

Pennsylvania State University
University Park, PA

Cooperative Education is much more than a key recruiting tool for Penn State, it is an educational tool that enriches the lives and learning environment of our students. The hands-on and life experiences gained through an academic based co-op program is a fundamental contributor to the quality of our engineering and science programs. We are continually challenged to improve the partnership among our engineering educators, our students, and our employers. By successfully integrating cooperative education into our academic programs, we develop engineers and scientists who are among the most highly recruited in the country.

Dr. Graham B. Spanier
President

Program Orientation for Co-op

Orientation varies among departments. Engineering: Required 3-hour orientation for prospective students, followed by a one-hour session if they accept a co-op position. Science: students must meet with the co-op administrator. Optional workshops on job search and workplace skills for both Engineering and Science are offered.

Institutional Recognition of Co-op

1-3 credits in Engineering (determined by department); 2 credits in science. In most cases, credit counts towards the degree.

Integrated Learning Mechanisms

- **Credit is awarded** through department deans. Faculty members work with students on their paper and evaluation of the experience.
- **Faculty** review student projects or reports and student evaluations.
- **Worksite supervisor** provides an evaluation. In engineering, student and employer evaluation forms meet ABET 2000 accreditation recommendations.
- **Departmental faculty members** receive a list of students and employment sites.
- **Faculty members** participate in informal sessions for potential co-op students.
- **Science research projects** are done off-campus through co-op. They have faculty support for co-op learning objectives in a terminal degree program in biotechnology where students go directly into work.

New/Special Administrative Practices

- Engineering uses a web-based system for placement. The system is accessible to students at all Penn State campuses and colleges. They provide a resumé book for employers attending Career Day.
- Engineering has two job developers in distant locations, cultivating work sites, assisting in matching students, and providing relocation help.
- Science produces and distributes a report on the graduate schools and companies of co-op graduates to demonstrate academic value and build faculty support.

Special High School/Employer Outreach

- State system provides links between the Commonwealth campuses and the main campus.

CO-OP PROGRAM INFORMATION: Ms. Susan Knell, (Sci), 814-865-5000; Ms. Anita Todd (Eng), 814-865-1032

Institutional Enrollment: 71,870 (56,169 FT)
Co-op Students: 800
Co-op Employers: 300
Co-op periods: 4 or 8 months
Fee: None (tuition for credit)
Co-op begins: Junior, first semester
Co-op established: 1985
Min/max terms: 3 min (Engineering), 2 min (Science)
Characteristics: Optional, predominantly alternating
Selective criteria: 2.0 g.p.a.
Academic Divisions: Earth and Mineral Science, Engineering, Science

Rochester Institute of Technology
Rochester, NY

As a comprehensive technological university dedicated to a career education, cooperative education has always been a cornerstone of the educational process at the Rochester Institute of Technology. Consistent with our institutional strategic initiatives, we are exploring ways to increase the diversity of our co-op program through the enhanced recruitment of underrepresented students and the greater involvement of smaller, minority-owned businesses and organizations. Further, RIT is continuing its commitment to being 'first in class' by aggressively benchmarking our co-op program services to ensure the best possible support to our students and participating employers.

Dr. Albert J. Simone
President

Program Orientation for Co-op

Orientation varies by division, with a 4-hour orientation and training program as the minimum requirement. Co-op student handbook (or an on-line version available through the office web site) includes information on how students can best integrate the co-op experience in the classroom setting.

Institutional Recognition of Co-op

Co-op is mandatory for most students, optional in certain academic departments. There is a transcript notation of co-op experience with a pass/fail grade. No academic credit is awarded.

Integrated Learning Mechanisms

- **Academic department faculty** set program standards, approve work assignment settings, and credit the completed student co-op experiences.
- **Faculty members** base their final approval on the student-prepared work report and employer evaluation of the co-op student's on-the-job performance.
- **On-site visits** are used to ensure consistency and integrity of work assignments with academic goals and objectives.
- **Co-op coordinators are assigned to specific academic departments** and regularly attend faculty meetings, Industrial Advisory Boards gatherings, and participate in department strategic planning efforts.

New/Special Administrative Practices

- Student registration, resumé preparation, job-opening information, program and job-search materials are available via the web. Employers have direct access to candidates via the web.

Special High School/Employer Outreach

- RIT is involved in a STW partnership and also participates in a New York State project with the Education Commission of the States geared towards connecting learning and work in the postsecondary setting.
- The web is used extensively for employer and prospective student outreach while co-op is a significant part of the institutional message.

CO-OP PROGRAM INFORMATION: Mr. Manny Contomanoulis (716) 475-2301

Institutional Enrollment: 12,600 (8,554 FT) **Co-op Students**: 2529 **Co-op Employers**: 1311
Co-op periods: 13 weeks/26 weeks **Fee:** None **Co-op begins:** Junior, 1st sem. (most)
Co-op established: 1912 **Min/max terms:** 2 min; 5 max (varies by department)
Characteristics: Mandatory (most), optional; alternating **Selective criteria:** Good academic standing
Academic Divisions: College of Applied Science and Technology, College of Business, College of Engineering, College of Imaging Arts & Sciences, College of Liberal Arts, College of Science, National Technological Institute for the Deaf

The University of Montana
Missoula, MT

An increasing shift of educational costs from the State to the student, a cap on the number of credits a student can take at the resident tuition rate, and a reduction in credits required to graduate, all will affect work-based learning at The University of Montana. Due to this indirect pressure to graduate in four years, students may find it less desirable or acceptable to alternate between periods of full-time school and work. Problematically, this will occur as employers place increased importance on work experience. This presents us with an opportunity to seek to reconcile traditional cooperative education opportunities and other types of work experience. To do so, we will need to provide students with a broad spectrum of parallel work-based learning opportunities including cooperative education, internships, and service learning.

Dr. George M. Dennison
President

Program Orientation for Co-op

An orientation meeting with work-based learning staff is recommended. Students should demonstrate interviewing and resumé skills. Optional workshops on job search and workplace skills are offered.

Institutional Recognition of Co-op

One or more credits per term. Credit counts towards the degree in most cases.

Integrated Learning Mechanisms

- **The Learning Agreement** is signed by the student, employer, faculty and work-based learning director. The agreement includes a job description, goals, work schedule and linkage to academics.
- **Requirements for credit** vary by department. Most have a paper and a weekly journal or letter. Topics cover what was learned and how it relates to the student's education.
- **Evaluations** are completed at mid-term and at the end. There is a student evaluation, and an employer evaluation with written student response. Some faculty members use the final evaluation to help with grade determination.
- **Faculty members refer students** to be peer presenters in the classrooms, speaking about work-based learning.

New/Special Administrative Practices

- They established web-based student and employer information, but specific employer locations are kept in the office to ensure students follow procedure.
- With staff cuts, they encourage student initiative and have 40% of work experiences self-developed.
- The number of students is stable but the number of credits has declined.

Special High School/Employer Outreach

- The program director attends local STW meetings.
- Unique co-op opportunities have attracted attention. WOW - Widening Our World (sponsored by US West) had two co-op students traveling in Montana and Idaho in a van with computers to bring world wide web information to small businesses.

CO-OP PROGRAM INFORMATION: Dr. Terry Berkhouse (406) 243-2815

Institutional Enrollment: 11,000 (8,500 FT) | **Co-op Students**: 503 | **Co-op Employers**: 200
Co-op periods: 15 weeks | **Fee:** $5/credit | **Co-op begins:** Sophomore, 1st semester
Co-op established: 1980 | **Min/max terms:** None
Characteristics: Mostly optional,; mostly parallel | **Selective criteria:** 2.0 g.p.a., higher in some depts.
Academic Divisions: 31 Departments within: College of Arts & Sciences; School of Business; School of Education; School of Forestry; School of Fine Arts; School of Journalism; School of Pharmacy & Allied Health Sciences; College of Technology

University of Cincinnati
Cincinnati, OH

Globalization summarizes the future of the cooperative education program at the University of Cincinnati. We see global cooperation among employers and universities to establish a worldwide cooperative exchange program.

Dr. Joseph A. Steger
President

Program Orientation for Co-op

Orientation course (1credit-hr.) with an in-house textbook is required. Students must have certification of eligibility by the college, verifying their stage in the curriculum and g.p.a. Students have multiple meetings with their co-op faculty advisors in advance of the initial assignment to co-op positions.

Institutional Recognition of Co-op

Co-op (Professional Practice) is required for the degree in three colleges, optional in three. There is a transcript notation of participation with a Pass/Fail grade. No course credit-hours are awarded.

Integrated Learning Mechanisms

- **Co-op director is on the Council of Provosts and Deans.**
- **Co-op coordinators have full-time, tenure-track faculty status** and are assigned to disciplines. Co-op faculty members are regularly included in college and departmental faculty meetings. Co-op faculty members have the same level of representation on the Faculty Senate as the colleges.
- **Student job descriptions** are provided to faculty in the colleges each quarter.
- **Faculty liaisons** to co-op are used in some departments.
- **Co-op student handbook** defines program policies and practices and the mission of student learning from experience.
- **Learning plans** vary by discipline. These include student reports (required for all), learning portfolios, work journals, and skill/competencies and performance inventories.
- **Capstone courses** for engineering students are required. In this credit-bearing course, students bid on an industry project and the company provides a budget. (Usually done in teams of approximately three students).
- **Portfolios** are used for architecture and design students.
- **Division of Professional Practice** has college level code and could offer courses for credit as an academic unit.
- **Macro Syllabus for Co-op** has been agreed upon, and will be followed by syllabus for specific work terms.
- **An Educational Strategic Plan** has been developed to expand the focus on guiding and assessing co-op learning.
- **Evaluations** on work performance are completed by employers. Co-op faculty members assess the learning and college faculty provide oversight.

CO-OP PROGRAM INFORMATION: Mr. Sam Sovilla (513) 556-4636

Institutional Enrollment: 36,000 (23,725 FT) | **Co-op Students**: 3507 | **Co-op Employers**: 1352
Co-op periods: 3 months | **Fee:** $50/term | **Co-op begins:** Sophomore, 2nd semester
Co-op established: 1906 | **Min/max terms:** 2 min (2-yr colleges), 4 min (baccalaureate); 7 max
Characteristics: Mandatory & optional; alternating | **Selective criteria:** Min g.p.a. by dept,complete 1st yr, pass req. prep. courses
Academic Divisions: Applied Sciences; Arts & Sciences; Business Administration; Design; Architecture; Art; Urban Planning; Engineering

University of Louisville
Louisville, KY

The University of Louisville encourages work-integrated learning opportunities for students in all of our 12 undergraduate, graduate and professional schools. Our cooperative education program includes a broad range of job opportunities--paid and unpaid; part-time and full-time; local, national and overseas. Our graduates have the opportunity to integrate theory with practical experience in their chosen degree program. The various co-ops available benefit both our students and the community. The community and our region benefit from a rich source of manpower and an infusion of bright fresh minds which is in perfect keeping with our institution's metropolitan mission.

Dr. John W. Shumaker
President

Program Orientation for Co-op

Orientation varies by department. Engineering requires a semester-long course on job search skills, co-op process and report, & technical writing. Optional workshops, individualized meetings, or self-study for Arts & Science, Bus.

Institutional Recognition of Co-op

2-6 credit hrs/term, varying by department and amount of hours at work. Credit counts towards degree, and is mandatory for graduation in some programs.

Integrated Learning Mechanisms

- **Learning objectives** are developed by students and supervisors and often are linked to progress towards career and academic goals. (A&S, Bus)
- **Engineering student co-op reports** include company background, major duties performed, and evaluation of contributions and accomplishments. They are sent to academic advisors. Some depts. use it for technical writing requirements.
- **Faculty** approve positions and award grades (A&S, Bus). Faculty meet with students at beginning of term, and co-op staff act as liaison to employers (Bus).
- **Mechanisms integrating learning** vary in A&S, and may include a structured course, portfolio, journal, etc.
- **Evaluations** measure progress towards career and academic goals.
- **Co-op is mandatory** for CIS majors in Business, and for engineering majors.

New/Special Administrative Practices

- Engineering has offered a 5-year Masters program with mandatory co-op since 1970. Co-op office also does graduate placement.
- The university is beginning to use on-line posting of positions and student information. Arts & Sciences is using computerized job-matching.
- Website information and interactive internet services are being updated for use by employer, students, and faculty (Bus).
- Business offers services for MBA students. Some participate in co-op, but register as independent study. The college is exploring establishing a co-op course number for graduate students.

Special High School/Employer Outreach

- Co-op office (Eng) has conducted outreach to high school counselors.
- Engineering co-op director has given presentations on co-op to plant manager groups and personnel associations to attract employers.

CO-OP PROGRAM INFORMATION: Joseph Pierce 502-852-6279 (Eng); Suzanne Iida 502-852-7756 (Bus); Carol Olorunsola 502-852-6701 (A & S)

Institutional Enrollment: 21,218 (7,694 FT)
Co-op Students: 658
Co-op Employers: 500
Co-op periods: 16-24 weeks
Fee: None
Co-op begins: Soph (A&S,Bus), Jr. (Eng)
Co-op established: 1926
Min/max terms: 3 max
Characteristics: Mandatory & optional, alt & parallel
Selective criteria: Varies by dept., good academic standing
Academic Divisions: Arts & Sciences; Business; Engineering

Waukesha County Technical College
Pewaukee, WI

In a world economy, Waukesha County Technical College (WCTC) will continuously improve its services to meet the technical and vocational training needs of our students, employers and community. The mission of the Cooperative Education program at WCTC is to enhance students' technical knowledge and Critical Life Skills by providing supervised work experience that applies classroom learning in a work setting. During a time when employer requests far outnumber the availability of students to fill Co-op spots, the challenge facing the College and the Co-op program is to help employers design innovative approaches to workforce development.

Dr. Richard T. Anderson
President

Program Orientation for Co-op

Individual meetings with a co-op coordinator (1-2 sessions minimum) are required.

Institutional Recognition of Co-op

3 Credits/term. Credit counts towards the degree, with a maximum of 6 credits. Co-op is a required component in all new associate degree programs.

Integrated Learning Mechanisms

- **Co-op coordinators are teaching faculty.**
- **Integration of Critical Life Skills** (derived form SCANS) is a recent requirement for all vocational and occupational programs.
- **Mandatory co-op** is required in all new associate degree programs.
- **Learning agreement** is required, and is developed and signed by the student, faculty and employer
- **Weekly seminar** (1hr/week for 18 weeks) is taught by the co-op instructor. Requirements vary by department.
- **Faculty conduct on-site meetings** with supervisor and student two times a semester.
- **Evaluation forms** are used to assess Critical Life Skills. There are required evaluations by the employer and faculty. Classroom and workplace training are evaluated.
- **Portfolios** are now required for co-op.

New/Special Administrative Practices

- The college president of 32 years has provided stability and strong support for cooperative education.
- They have established international independent learning projects with schools in other countries. Students can complete co-op requirements through the international experience.

Special High School/Employer Outreach

- Co-op is now housed in the One-Stop Career Center (Workforce Development Center). This is designed to improve services for students, employers and other job seekers.
- Advanced standing can be requested by students who participated in Youth Apprenticeship or STW and received high school credit for the experience.

CO-OP PROGRAM INFORMATION: Ms. Jean Donovan (414) 695-7801

Institutional Enrollment: 32, 923 (6,800 FT) **Co-op Students**: 1105 **Co-op Employers**: 545
Co-op periods: 18 weeks (9 weeks in summer) **Fee:** None (Tuition for the credits) **Co-op begins:** Sophomore, first semester
Co-op established: 1981 **Min/max terms:** 1 min; 2 max
Characteristics: Mandatory and optional; parallel **Selective criteria:** 2.0 g.p.a., pre-req. courses, 5 successfully completed
Academic Divisions: Academic Support, Business, Industrial Occupations, Service Occupations,

Wilberforce University
Wilberforce, OH

Cooperative education is important to any student, however, it is extremely beneficial to African American students. At Wilberforce University, the nation's oldest historically African American university, mandatory cooperative education has been central to the university's mission since 1964. As a tool for career counseling, cooperative education allows Wilberforce students the opportunity to test career choices before graduation, which can make the difference between success and failure in a very competitive marketplace. As we envision the beginning of the 21st century, cooperative education will continue to be a means for businesses to meet their strategic needs in a changing global society.

Dr. John L. Henderson
President

Program Orientation for Co-op

There is an orientation class for sophomores (2 credit hours) that meets two hours per week for one term. Topics include workplace culture, researching a company, and job and communications skills. Students meet with a co-op counselor.

Institutional Recognition of Co-op

Co-op is required for the degree. There is a transcript notation (satisfactory or unsatisfactory).

Integrated Learning Mechanisms

- **Orientation class** provides students with job search and work culture training, and explores students' career and academic goals.
- **Students and employers provide evaluations**, identifying job responsibilities at the beginning and evaluating the work experience at the end.
- **Position approval and on-site visits** sometimes include faculty.
- **Debriefing seminar** is conducted by co-op staff.
- **Standing Faculty Committee** was recently approved to be advisory to the co-op department.
- **Informal interaction** takes place with the faculty concerning students' strengths and weaknesses.
- **Co-op Advisory Board** is active in academic classes.

Special High School/Employer Outreach

- The college has informal arrangements for students to work in elementary schools on the topic of careers.

CO-OP PROGRAM INFORMATION: Dr. Daisy Foster (937) 376-2911, ext. 745

Institutional Enrollment: 850 | **Co-op Students:** 100 | **Co-op Employers:** 100
Co-op periods: 16-18 weeks; Summer, 8 weeks | **Fee:** None | **Co-op begins:** Sophomore, 2nd semester
Characteristics: Mandatory; parallel | **Selective criteria:** 2.0 g.p.a., computer literate
Co-op established: 1964 | **Min/max terms:** 2 min; 4 max
Academic Divisions: Business & Economics, Engineering & Computer Science, Humanities, Natural Science, Social Science, Communications, Social Work

Profiled Institutions

NCCE gratefully acknowledges the participation of the following presidents and practitioners in the *Institutional Profiles of Integrated Learning*.

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